

BEFORE THE
POSTAL REGULATORY COMMISSION
WASHINGTON, D.C. 20268-0001

MAIL PROCESSING NETWORK RATIONALIZATION
SERVICE CHANGES, 2011

Docket No. N2012-1

**RESPONSES OF UNITED STATES POSTAL SERVICE
WITNESS EMILY ROSENBERG
TO APWU INTERROGATORIES APWU/USPS-T3-1 THROUGH 19**

The United States Postal Service hereby files the responses of witness Emily Rosenberg to the above-listed interrogatories of the American Postal Workers Union dated December 22, 2011. Each interrogatory is stated verbatim and followed by the response.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

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RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS ROSENBERG TO AMERICAN POSTAL WORKERS UNION INTERROGATORY

APWU/USPS-T3-1 On page 4 of your testimony you state that “initial modeling efforts focus on the processing of letter volume when considering the establishment of a more efficient set of operating windows under new service standards.” Was the most important aspect of the concept underpinning the model the full utilization of Postal Service mail sorting equipment? If not, please more precisely describe what was being maximized in this model.

RESPONSE

The Postal Service is maximizing two components within the framework of the modeling exercise based on the inputs that were created. The first was the utilization of equipment. That was maximized through the opening of operating windows which could be created through changes in First-Class Mail overnight service standards. The second component was the utilization of the square footage of the facilities. This was done through the estimates of square footage required for each 3-digit ZIP Code based on the redefined operating windows, as well as the estimated amount of workload required to be worked. The model, in seeking to minimize costs, assigned ZIP Codes to facilities to most fully utilize the facilities given the constraints of the model.

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APWU/USPS-T3-2 Did any of your modeling efforts focus on minimizing the processing footprint given the current service standards? If so, what did those modeling efforts show? If minimizing the processing footprint given the current service standards was not examined in your modeling, please explain why this was not done.

RESPONSE

See the response to GCA/USPS-T1-1. The Postal Service did not model current service standards between points remaining in place.

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APWU/USPS-T3-3 On page 6 of your testimony you state that the FY2010 MODS workload was spread evenly across the 3,119,884.69 square miles of the 48 contiguous states of the United States.

- a) This would seem to indicate that you did not use actual 3-digit pair volume to determine the actual origin-destination distribution of the mail volume. Is that correct?
- b) Was the volume also assumed to be spread evenly over the year?
- c) Why were the even workload assumptions made?
- d) If workload was not even either geographically or over time, wouldn't that impact the processing time windows being tested? If not, why not?

RESPONSE

- (a) Confirmed. 3-digit ZIP Code pair volume was not included in the scoring tool.
- (b) The volume was spread evenly over the year in the scoring tool.
- (c) See the response to PR/USPS-T3-12. The Microsoft Excel Scoring Tool was used as a high-level model to assess operating windows. This initial analysis was focused on operating windows that needed to be set to service all parts of the geography of the United States, including sparsely populated remote areas. Thus, distributing volume by mailing patterns was not required at this initial stage for defining operating windows. Mail volume distributions and workload requirements were subsequently utilized within the LogicNet Plus modeling.
- (d) The fluctuation in volume can be addressed by the quantity of equipment.

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APWU/USPS-T3-4 On page 8 of your testimony you state that delivery points over 66 miles away were consolidated at an intermediate hub location but also state that decisions regarding how to route local transportation will be made at the local area through the AMP process.

- a) Footnote 7 states that the 66 miles was chosen based on a sensitivity analysis that included an 8 hour operating tour, a zero trip cost and a minimum building size of 21, 265 square feet but that these were not steadfast rules being employed in the final network design. Was the 66 miles used as a parameter in guiding the final design or was it simply used as part of an exercise in testing how processing window length could relate to ultimate service standard design?
- b) What is the average square footage of the Postal Service's current P&DCs?
- c) In your modeling exercise what type of facility was being used as a hub? Was this type of facility engaged in mail processing or was it just a cross docking location?
- d) Does the Postal Service currently use a hub and spoke system or is it a hybrid system which uses some hub and spoke consolidation but also includes direct transportation runs for high volume pairs?
- e) Is the proposed network a strict hub and spoke system or a hybrid system?

RESPONSE

- (a) The hub concept was examined to account for the additional transportation time and its impact on operating windows when processing nodes are further away from the collection and delivery units.
- (b) The average for the 251 facilities in the USPS 2011 Annual Report is 247,868 square feet.
- (c) The hub could be a standalone facility. This stage of modeling did not define specific nodes.
- (d) It is a hybrid approach today.
- (e) The proposed network is likely to be a hybrid system.

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APWU/USPS-T3-5 On page 11 of your testimony you state, “the Excel tool is a rational way of developing a starting point for discussion to illustrate the opportunities presented by relaxing service standards.” Can this model be used to look at options that maintain current service standards while changing other parameters?

RESPONSE

Yes.

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APWU/USPS-T3-6 On page 12 of your testimony you state, “the operating windows were used in conjunction with MODS FY2010 workload to determine the configuration of the mail processing network under the proposed service standards.”

a) Please confirm that the configuration of mail processing locations that came from this modeling exercise is predicated on the relaxed service standards being in place. Please explain any answer other than an unqualified confirmed.

b) Was this model ever used to estimate a configuration of mail processing locations that assumes the current service standards remain in place? If so, what was the outcome of that modeling exercise?

RESPONSE

(a) Confirmed, the operating windows derived from the Scoring Tool are only feasible under a no overnight network design. For example, DPS can not begin running at 12:00 PM if the plant needs to wait for the overnight partners volume to arrive given the cancellation window does not even begin until 5:00 PM.

(b) See the forthcoming response GCA/USPS-T-1. The Postal Service did not model current service standards between points remaining in place.

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APWU/USPS-T3-7 On page 12 of your testimony you indicate that the FY2010 MODS workload was also used in this modeling of the configuration of the network.

- a) Did this also assume evenly distributed workload both geographically and over time or did it use the actual volumes for each 3-digit origin-destination pair?
- b) If the latter was used, did it break the workload down by shape and type or use a gross volume number between geographic locations?

RESPONSE

- (a) Not confirmed. In the LogicNet Model the volume was disaggregated to the 3-digit ZIP Code level as described in Section III. B. 3 of USPS-T-3.
- (b) The volume was categorized by shape and type as outlined in section III. B. 3 of USPS-T-3.

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APWU/USPS-T3-8 On page 14 of your testimony you state “No capital investments were allowed in the model in light of the Postal Service’s current cash flow situation.” Was this model ever tested to see if a more efficient configuration could be achieved if some level of capital investment was allowed? If not, could this model be used to test that?

RESPONSE

The model did not allow for facility expansion. The current model would need to be modified to be run to allow for building expansion.

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APWU/USPS-T3-9 On page 16 of your testimony you state that the variable portion of the transportation costs was set to \$1.82 per mile based on “lessons learned and refined assumptions.”

- a) Please identify with specificity the “lessons learned and refined assumptions” and how those lessons and assumptions were used to calculate these transportation costs.
- b) You also state a fixed \$100 per plant lane was added to reflect more accurately the cost of local transportation. How was that number determined?

RESPONSE

(a) In the scoring tool, \$1.80 per mile was used. Based on Highway Contract

Route data refresh, the dollar per mile was revised to \$1.82 per mile.

(b) Test models were run with varying transportation fixed costs. The \$100 per plant lane was determined as the total costs more accurately estimated the ratio of transportation to mail processing costs.

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APWU/USPS-T3-10 You state on page 16 that based “on Logic Net’s transportation cost algorithm, the \$100 per lane assumption most accurately represented the current ratio of transportation cost to mail processing cost.”

- a) What period of time does “current” refer to in this statement?
- b) If transportation and mail processing costs were different from the current ratio would that cause a change in the configuration of the proposed network?
- c) Would you agree that Logic Net trades off transportation costs and plant node costs to determine the configuration of plants?
- d) Was this model also used to test configurations of transportation and mail processing costs that were likely under the terms of the most recent APWU contract? If so, how did the configuration of that network differ from the one that resulted from the “current ratio?”

RESPONSE

- (a) Fiscal Year 2010 was the bench mark we used for the analysis.
- (b) Yes, Logic Net’s objective is to minimize cost. The cost function includes both mail processing and transportation costs. If the costs were different the results would also differ.
- (c) Confirmed.
- (d) No. The Logic Net modeling did not account for complement.

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APWU/USPS-T3-11 On page 16 of your testimony you state that if a “facility had no cancellation equipment, its production capacities for cancellation were cut by 67 percent to allow for additional travel time to be transported to an automated cancellation facility.”

a) This seems to assume that transportation costs are always cheaper than buying or moving a cancellation machine to the plant location. Is that the assumption in the model?

b) Did this model assume that each mail processing location could only use the fixed equipment that was already in place? If not, what was the assumption about the mail processing equipment at this step in the analysis?

RESPONSE

(a) The reduction in AFCS model capacity was only applied to processing nodes that did not currently have cancellation equipment. Thus, the volume was already being worked at an alternate location. Thus, the model was allowed to assign cancellation to the site, but only if the transportation costs outweighed that of maintaining AFCS processing in that facility.

(b) The modeling decisions were all based off of equipment footprint requirements as explained in section III.B.3 of USPS-T-3. The facility square footage could be utilized for processing all products. For the model, it was less expensive to process the parcels and bundle volume in existing APPS sites, than sites with no parcel and bundle sorting equipments making current parcel and bundle sorting locations more attractive to the model since they are less costly and the objective is to reduce cost.

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APWU/USPS-T3-12 Pages 17-20 of your testimony describe the process whereby 61 of the locations activated in the modeling scenario were replaced with 71 locations chosen because of area specific knowledge. On page 20, you state that "Western Area mail processing and transportation managers preferred to relax the 200-mile distance constraint so as to reduce the number of smaller processing centers in more remote locations."

- a) What factors were considered in relaxing the 200-mile distance constraint?
- b) Was the potential impact of bad weather in those locations one of the factors that was considered in that analysis?
- c) Why did the mail processing and transportation managers consider smaller plants to be less desirable than larger plants?

RESPONSE

- (a) As the results were analyzed with the new operating constraints, operational experts based on their knowledge of local conditions felt in some instances relaxation of the mileage constraint was possible.
- (b) Weather was considered during the review process.
- (c) It is not that smaller plants are less desirable than larger plants, but the fact that the smaller plants will have less volume going to the respective destination processing nodes. For example, letters are sorted into handling units and handling units are sorted into containers to be transported between plants. If there are more small plants, there is a greater likelihood of having partial trays and partial containers. A partially fully tray and a partially full container take up the same footprint on a truck as a full tray or full container respectively. Thus, in the case of surface transportation, each piece in an underutilized container cost more to transport if the cost of the truck is fixed. In addition, our tray sorting equipment can handle a specific number of trays per hour. More equipment would be required to process the additional trays caused by the trays only being partially full.

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APWU/USPS-T3-13 On page 21 of your testimony you state that origin mail arrival profiles were used to generate the proposed equipment sets for each location.

- a) Identify the steps for generating these volume profiles by location.
- b) Was a separate volume profile generated for each class and shape of mail at each location?
- c) Did the process for generating the volume profiles use FY2010 volumes for the specific 3-digit zip codes assigned to each processing location and sum them?
- d) What consideration was given to the possibility that mailer behaviors would change in response to the revised service standards and thus potentially produce a completely different mail volume profile including days with larger mail volumes than are currently seen?

RESPONSE

(a) The steps to generate the volume arrival profile can be found in footnote 28 of my testimony.

(b) No, one VAP was applied to all single piece volume regardless of shape.

Footnote 30 describes the volume arrival profile assumptions used for Mailer volume.

(c) No, as described in my testimony Transportation Information Management System utilization was used to determine the distribution for volume arrival profile.

(d) No specific consideration was given to the change in mailer behavior.

Footnote 30 describes the methodology used to approximate the mailer volume arrival profile.

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APWU/USPS-T3-14 On page 21 of your testimony you state that peak volumes for the AFCS were set at the 75th percentile of FY 2010 because there is room to expand the processing window but set at 95th percentile of FY2010 data for DBCS because the processing window could not be expanded.

- a) How was it decided that the peak capacity could be set at 95 percent of the 2010 volumes? Was this set below 100 percent because the service standards had been relaxed?
- b) Was any equipment redundancy built in to maintain the reduced service standards in case of machine breakdowns or other unexpected circumstances? i.e. what assumptions were used to ensure that there was enough capacity to improve the consistency of meeting the service standards?

RESPONSE

- (a) It is not 95 percent of the FY2010 volume, but the 95 percentile, which represents the 14/15 highest volume day. There are other mitigating strategies to handle peak days and thus equipment sets are not planned for the highest day of the year.
- (b) As noted in response to subpart (a), the Postal Service utilized a peak factor for estimates of equipment needs. On most days, the Postal Service will not require that much capacity which will allow some ability to manage unexpected circumstances.

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APWU/USPS-T3-15 On pages 23 of your testimony you state that certain volumes had to be achieved before an AFCS or a DBCS machine was earned for the site.

- a) If a site did not “earn” an AFCS does that mean it is not assumed to process mail requiring cancellation or does it assume the mail will be transferred to a different facility for cancellation and then returned to be processed?
- b) If a site did not “earn” a DBCS, does that mean that site does not process letter mail? If so, what happens to the letter mail from the 3-digit ZIP codes associated with that site?
- c) Please explain more precisely the assumptions that were used when a facility was determined to not have enough floor space to accommodate all the equipment this analysis assigned? How many facilities fit that situation?

RESPONSE

- (a) If there was not enough volume to earn the “first” machine, either the volume could be sorted manually or at the time of the AMP study another more suitable piece of equipment would be considered for processing.
- (b) No, it meant the Postal Service would review the situation and determine whether to allocate equipment or sort that mail manually. During this process, it was found that there was no site designated for letter processing that did not warrant at least 1 DBCS and/ or DIOSS.
- (c) The results of this modeling initiative are all preliminary. The proposals are currently under evaluation through the formal USPS Handbook PO-408 AMP review process. During that process, additional local and headquarters analysis will be completed to assess equipment and facility space needs reviewing additional items that cannot be evaluated with the model phase, such as column spacing and specific building configurations. During AMP review, it is possible the equipment sets will fit within the current building, alternatively, additional nodes may need to be maintained.

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RESPONSE to APWU/USPS-T3-15 (continued)

Lastly, a cost-benefit analysis may be completed to determine if expansion is cost justified by the savings of the consolidation. 37 sites fit this situation at the initial modeling stage.

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APWU/USPS-T3-16 Various throughputs were calculated from WebEOR data to determine the productivity of each of the machines.

- a) Were the throughputs based on averages for the machines over all plants?
- b) Was any consideration given to variations in throughputs by plant size?
- c) Was any correction made for the possibility that the reported throughput numbers were partly impacted by relatively low mail volumes?

RESPONSE

- (a) Yes, the throughputs were calculated on average overall machines for like machine types.
- (b) A decision was made not to use facility specific throughputs due to the changed operating concept under Network Rationalization.
- (c) It is for this reason, we chose to use national throughputs.

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APWU/USPS-T3-17 On page 34 of your testimony you state that some mail processing facilities in the proposed network would be dedicated to sorting a single product while other locations may process letters, flats, bundles and/or parcels. Was any consideration given to the possibility that customers might prefer to drop all their mail shapes at one facility rather than have to drop them at separate facilities? If so, how was that modeled?

RESPONSE

No.

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APWU/USPS-T3-18 Aside from DPS, what can DBCS be utilized for?

RESPONSE

In addition to DPS, a DBCS machine can be used for outgoing primary, outgoing secondary, incoming primary, and incoming secondary processing.

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APWU/USPS-T3-19 On page 2 of your testimony you state “this downtime creates unused capacity in the network which can only be reduced through the relaxation of service standards.” What led you to conclude that the relaxation of current service standards was the only way to reduce the unused capacity?

RESPONSE

There is limited ability to increase the utilization equipment without expanding the operating window. The operating windows, under current service standards, cannot be expanded without encroaching on the operating windows of downstream sortation, transportation, or delivery. As there is only so much time between mail collection and mail delivery, the overnight standard confines the amount of processing time allowed for delivery point sequencing and causes the need for additional equipment, which translates into additional facility square footage. Shortening processing windows results in larger equipment needs, exacerbating the issue of underutilized equipment. Shortening travel time means additional volume may need to travel via air to meet the service standards.